PLANNERS News Letter

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Institute of Town Planners India, Telangana Chapter
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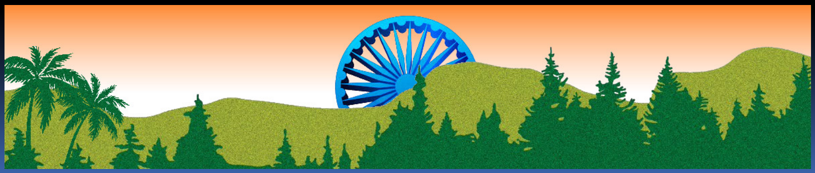


In this Issue

Special issue on focus with biophilia and plan strategies on biophilic characterization.

Intention of Panchayati Raj, a tribute to Mahatama on the stately occasion of Independence Day. Short description to detail the history of Panchayati Raj and influences on social welfare programs.

Yet time, the laws do intermix for decisive enablement to plan for biodiversity through very strong regulations. Opening the discussion/ scope in declaration of climate specific biophilia as heritage through ages.

Agriculture had been an oldest practice at early civilizations of humans, a forgotten art of survival for urban living. Attention on urban agriculture to be with the conservation orientation to local climates and species.

The trends of biophilic urbanism and society and polity are inclined to plan environment friendly neighborhoods.

Beauty lies with unique rocky landscapes in the geological phenomenon of Hyderabad city, and in dire straits due to irregular urban sprawl.

500 Years Legacy

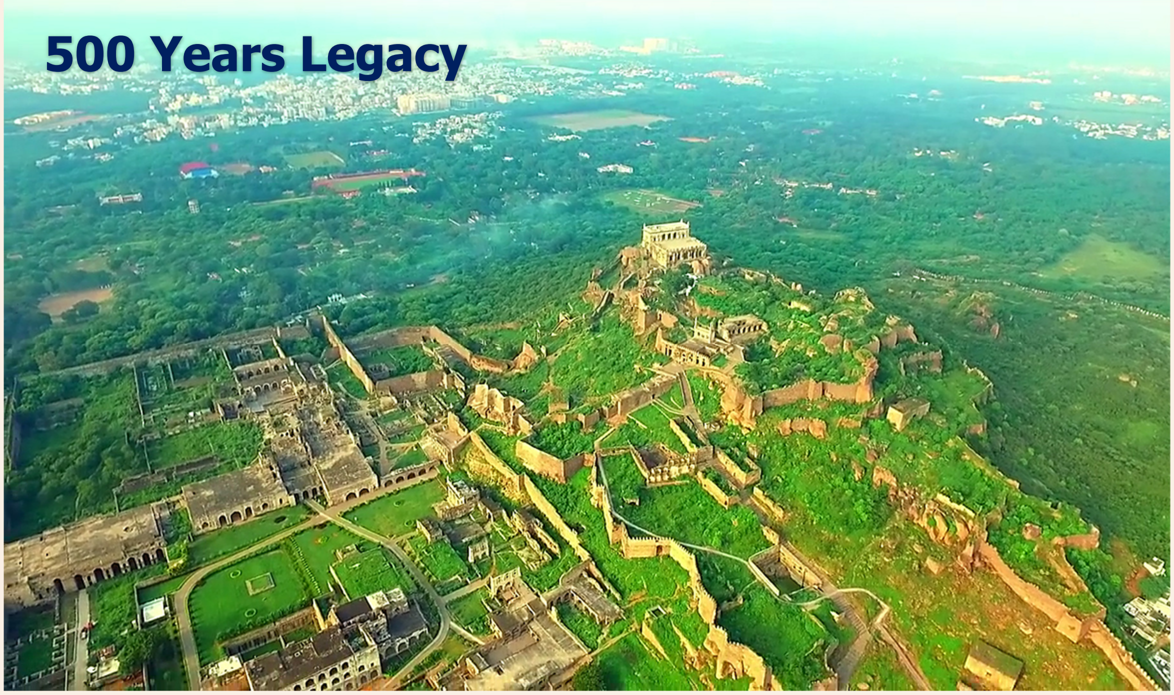


Image Courtesy: Telangana Tourism

The inscription on the entrance arch of Safa Masjid near Habshi Kaman and outside the Bala Hissar Darwaza of Golconda, during the restoration and repaint work, revealed the age of the monument dates to AD 1518 (٩٢٤ هِجْرِيّة).

> “ *Bina o Hazal masjidil Jame Fi Zamanis Sultanil Azam Al-Mutawakkil alallah Al-Ghani Abil Maghazi Mahmood Shah ibn Muhammad Shah Al-Bahamani*
>
> *Khulladallaho Mulkuhu wa Sultanahu Baneehe Al-Mubtahil Ilallah, Malikil Mulk Sultan Quli At mukhalib bi Qutubul Mulk Fi Sinati Arba wa ishreena wa Tiso Miati* ”

This writes, the mosque was built during the time of Bahamani Sultan Mahmood Shah by Sultan Quli Qutubul Mulk (appointed *subedar* by Bahamanis during 1495), founder of the Golconda Kingdom. It was subsequently after 73 years, Hyderabad came into existence across Musi River in 1591, built by Muhammad Quli who was the grandson of Sultan Quli. The Golconda Fort originally belonged to the Kakatiyas of Warangal, and was ceded to the Bahamanis in 1363. After the downfall of Bahamanis in 1518, it became the capital of the Qutb Shahi kings.

The masjid and the township were built by Sultan Quli, and over next few decades transformed the shepherd hill of Golconda into a diamond trading town (famous of *Koh-i-Noor*). Though many of the inner facilities are in ruins, the fortifications showcase former glory of the kingdom.

Politically, the importance of Golconda Fort has come into fore again after the decision from Telangana Government to conduct the customary flag hoisting on Independence Day from within the precincts of the Fort. This patriotic event was previously being conducted at Parade Grounds of Secundrabad Cantonment area, a British legacy at Deccan. ☙

Special Issue, **‘Biophilia’**

Biomimetics

Merriam-Webster meaning is 'the study of the formation, structure, or function of biologically produced substances, materials and biological mechanisms and processes especially for the purpose of synthesizing similar products by artificial means'. These advances are prevalent in engineering designs as imitating nature or a biological process as human supportive systems.

Species (including humans) are able to survive only in specific type of habitat for sustenance. Ignoring the nature, human purpose of systems have been on steep rise which have become detrimental to the life of other living species on the earth. This incidence is rampant across all spheres of life due to artificial perceptions on economic growth and development, and would lead to irrevocable transformation and cause unadorned obliteration of natural habitats, and added to the same on increased imbalance due to intensive rural agriculture and urban sprawls.

Though, biomimetics is a popular science for engineering the human domain, irrationality about the application of this advancement in science is cautioned for long-term uncanny results. Thus, bringing this science back to the working table in redefining the research for a cohesive concurrence of systems respecting the nature of imminent biodiversity.

Urban and regional planning is no different or exception from this phenomenon. Though biomimetics is for singularity at the micro-level of individuals or groups, but large scale calibration is an influence on planning at macro scale. There have been attempts by architects and ecologists to follow the biomimetics in the neighborhood plans to embrace the human habitat with nativity and other life forms, and needing further thoughts on biophilic future, the focus of this News Letter. ꕥ

Chairman's Desk

Global biodiversity focus is for life and environmental sustenance, and to a larger extent the knowledge of past shall be of a great help. The exigency in normalization procedure of nature require more efforts in understanding and restoring in-situ phenomenon and budgeting for ex-situ in preservation of legacy in-situ artifacts.

The decline in the biodiversity is a serious concern, and human alone can not sustain unless the complete ecosystem is intact. Rural environment is undergoing rapid changes due to intensive agriculture, use of pesticides and artificial soil nutrients. Commonly observed life forms have been rapidly disappearing (many perished) or migrating to safer areas. Urban, owing to planning regulatory controls, is still able to protect some amount of natural land forms.

S. Devendar Reddy, Chairman, ITPI-TRC.

Hyderabad Metropolitan development Authority (HMDA) hold more rural as a very large fringe to Greater Hyderabad Municipal Corporation (GHMC). Total to whopping number of 1032 villages are within the jurisdiction of HMDA, and these potentially are agriculture predominance. Amplified practices of cultivation over decades may already have altered the tolerance of local biodiversity except the close fringe to GHMC (175 villages may already be in the estate land model). HMDA is hypothetically inheriting a humongous scale of disobedient biodiversity.

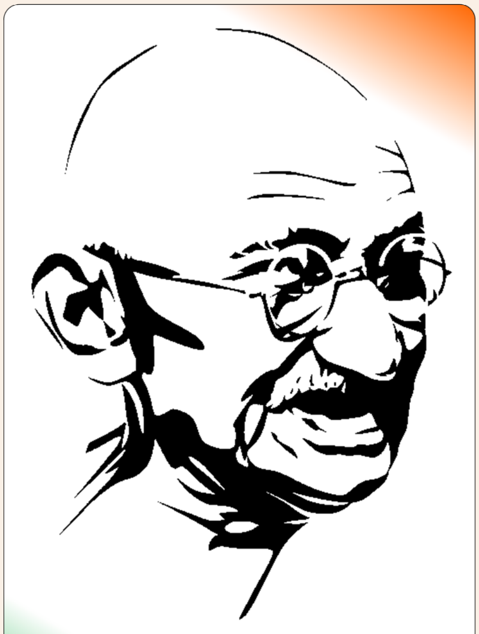
There are four critical tasks as the input to the master plans to be performed by HMDA, 1) discover the paradigm of original habitat before the modern agriculture practices, 2) propensity for conversion of rural to unilateral urban landuse, 3) true representation of biodiversity with reference to macro and micro climatic zones and 4) the most important — investigate the decay of biodiversity in GHMC area to conclude the extent of damage which may gradually proliferate to newly defined fringe in HMDA. Because, retrofitting the cause of biodiversity as compliance to "The Biological Diversity Act, 2002, MOEF, Government of India" and "Telangana State Biological Diversity Rules, 2015 through G.O.Ms.No.21 EFS&T (For.II) Department, dt.25-10-2014" may well be inclined to human welfare as the prime most concern politically.

The urban is becoming a dominant phenomenon with steep growth in population (refer to our News Letter Apr~June 2018) may lead to higher density of living on available space. The traditionally applied model, 'Impact = (Population x Affluence x Technology)', of impact assessment is highly assumptions driven to a complex problem solution, which is not an acceptable procedure any more. The research inclusion of urban studies must explore realistic applications on biodiversity that can influence the plan direction with qualitative and quantitative alternatives.

It is time, the planning indicators must be upgraded to enhance the urban analysis to adopt variety of variables from biophilia and ecological models, and also to include the built forms to support the environmental variations by regulation. The violators of habitats by nature and/ or rule on open spaces (inside or outside of their individual ownerships) and/ or emitters of greenhouse gases beyond the designed capacity must be punished by law. It is also necessary to develop faculties for establishing research on the urban ecological phenomenon in terms of homeostasis, and to be applied to each and every case of land development activity in comparison to the city as a unit of application to impacts. ꕥ

Right of Panchayati Raj, a True Sense of Freedom and Democracy

A tribute to the great visionary yet humble, Mahatama Gandhi, who had envisioned the true freedom is only possible through complete self-rule of villages, ‘Grām Swarāj’ (ग्राम स्वराज).



“My idea of village swarāj is that it is a complete republic independent of its’ neighbors for its’ own vital wants”.
— Mahatma.

Mahatma Gandhi favored the institution of Panchayats, and he had made this subject as part of his political program since the Non-cooperation Movement. It was stressed strongly on decentralization of economic and political power through organizing village panchayats. He was of the definite view that panchayat system in India, if prepared for all practicalities, would not only build up the social and economic strength but also create the forces of national defense against the risk of foreign economic invasion. Village Swaraj that is achieved by Panchayati Raj which in other terms is a non-violent and self-sufficient economic unit with fullest possible political power. Gandhiji proposed to work from bottom upwards, “Independence must begin at the bottom and every village will be a republic or panchayat. It follows therefore, that every village has to be self-sustained and capable of managing its affairs even to the extent of defending itself against the whole world”.

The latest formalization of this system of institution is done during in 1992 by the 73rd amendment to the Indian Constitution. Panchayats were the functional institutions at the grassroot level of villages from much before independent India. Motivation to the redevelopment of local institutions did happen in 1870 through Viceroy Lord Mayo’s Resolution. It was only after the freedom struggle intensified, British rulers have realized the demand for devolution of powers to self-governance, and especially with Mahatma Gandhi’s insistence, the Royal Commission on Decentralization in 1907 with the recommendations of importance to local administration. The true transformation did take place as provincial autonomy only after the Government of India Act of 1935. This was strongly influenced through the report by Montague and Chemsford on reforms in 1919 brought more clarity to constitutional changes.

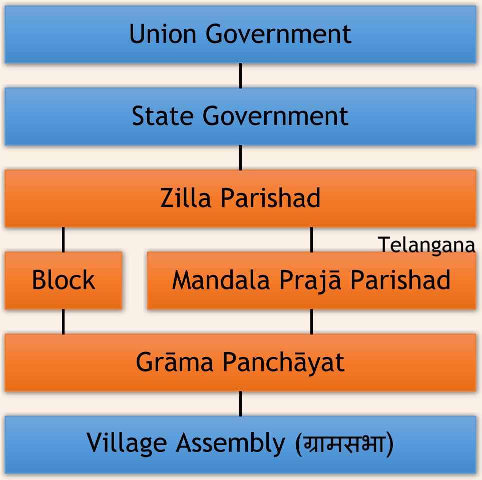
It was, indeed, the East India Company disempowered and destroyed the centuries old foundations of panchayat system that had strong roots in the Indian subcontinent, by granting the office of ‘Diwan’ at Bengal province by the Mughal Emperor as agreement of reparation after defeat at Buxar (1765). The enforcement abolished the village land records office and created an officiator called ‘Patwari’, and supported by ‘Darogha’ for upholding the law and order. It was only after 1857 the British tried to restore the panchayats by giving nominal powers, but this never reestablished the lost rights of the village communities.

Panchayat, the Sanskrit adaptation of pañcāyat, is a council of five influential older men acknowledged by the community as its governing body. It has profound references in Regveda (1700 BCE) for organized village bodies called sabhās. Kautilya (4th century BCE), royal adviser to Mauryan emperor Chandragupta, weaves a design of a tall governance going down to the level of village through his concept of Mandalas.

It was not an easy sail though for this obligation of devolution of powers to grassroot level communities even after independence, and realized after the failure of first five year plan to bring the full-fledged public participation in the planning process.

Panchayiti Raj has been alone the single constitutional provision that had been a well researched topic and reviewed system through appointed committees by Government of India,

- Balwant Rai Mehta, 1957
- V. T. Krishnammachari, 1960
- Takhatmal Jain Study Group, 1966
- Ashok Mehta Committee, 1978
- G. V. K. Rao Committee, 1985
- Dr. L. M. Singhvi Committee, 1986
- P. K. Thoongan committee, 1988



The Gandhian goal of people direct participation in the socio-political structure of Indian democracy started taking shape only after Balwant Rai Mehta Committee appointed, by the Government of India in January 1957, to examine the working of the Community Development Program (1952) and the National Extension Service (1953), where recommended for better working was the composition of three tier constitutional system, which paved the way for methodology been adopted by State governments during 1950s and 60s. The foundational backing is done by 73rd constitutional amendment (1992) for the provisioning of powers and responsibilities to the panchayats both for the preparation of economic development plans and social justice, and for implementation in relation to 29 subjects listed in the eleventh schedule of the constitution. 74th Amendment brought the similar powers to urban areas at par with their rural partners, ‘Nagar Panchayats’.

It is time to introspect for the rights transfer to the people by governments, a righteous dream by Mahatma.

The Crusaders of Change: Biodiversity in Conjunction with Heritage

Syed Md. Muzaffar Hussain

“Every scrap of biological diversity is priceless, to be learned and cherished, and never to be surrendered without a struggle” said by Edward O. Wilson, pioneer in biodiversity research, and declared that biological diversity is the oldest human heritage.

Many a time, the combinational synergy between two or more ‘Acts’ provide additional controls for law enforcement resolutions. The building of planning guidelines for practicing legally acceptable options for protection of biodiversity can be supportive through heritage insights. Especially in Telangana, with the new enactment along the inclusivity of heritage, the mutual alignment of two legislated acts from Union and State Governments can deliver much tougher stance on the socio-ecological justice, while the categorization of subject areas and jurisdiction becomes much clearer, and planning process could certainly prepare befitting objectives.

Biological Diversity Act, 2002. No. 18 of 2003:

§ 1. 2. (a) “benefit claimers” means the conservers of biological resources, their byproducts, creators and holders of knowledge and information relating to the use of such biological resources, innovations and practices associated with such use and application.

§ 1. 2. (b) “biological diversity” means the variability among living organisms from all sources and the ecological complexes of which they are part, and includes diversity within species or between species and of eco-systems.

§ 1. 2. (c) “biological resources” means plants, animals and micro-organisms or parts thereof, their genetic material and by-products (excluding value added products) with actual or potential use or value, but does not include human genetic material.

§ 9. 36. (2) Where the Central Government has reason to believe that any area rich in biological diversity, biological resources and their habitats is being threatened by overuse, abuse or neglect, it shall issue directives to the concerned State Government to take immediate ameliorative measures, offering such State Government any technical and other assistance that is possible to be provided or needed.

§ 9. 36. (3) The Central Government shall, as far as practicable wherever it deems appropriate, integrate the conservation, promotion and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.

Telangana Heritage (Protection, Preservation, Conservation and Maintenance) Act, 2017. No. 22 of 2017:

§ 1. f) ‘Conservation’ means the process involved in the preservation of a Heritage structure building/ site/ precincts in order to retain its historical, architectural, environmental or cultural significance including the maintenance and according to necessity preservation, restoration or reconstruction or a combination of more than one of the above.

§ 1. g) ‘Preservation’ means the maintenance necessary in order to maintain the Heritage structure building/ site/ precincts in its present state so as to prevent and retard any further deterioration from its present state.

§ 1. i) ‘Restoration’ includes the means necessary to return the heritage structure building/ site/ precinct to its earlier state as might have existed prior to change occurred by way of demolition, removal, addition etc., as a result of the removal of accretions or reassembling the existing components or by the sensitive introduction of compatible materials.

§ 1. r) ‘Heritage Precincts’ means and includes any space that requires conservation and/or preservation for historical and/or architectural and/or aesthetic and/or cultural and/or environmental and/ or ecological purpose. Walls or other boundaries of a particular area or place or building or may enclose such space by an imaginary line drawn around it.

§ 3. 1. (a) The tangible Heritage consists which includes, (ii) Natural site/ areas of outstanding universal value from the point of view of history, art, or natural beauty, precisely delineated from natural areas.

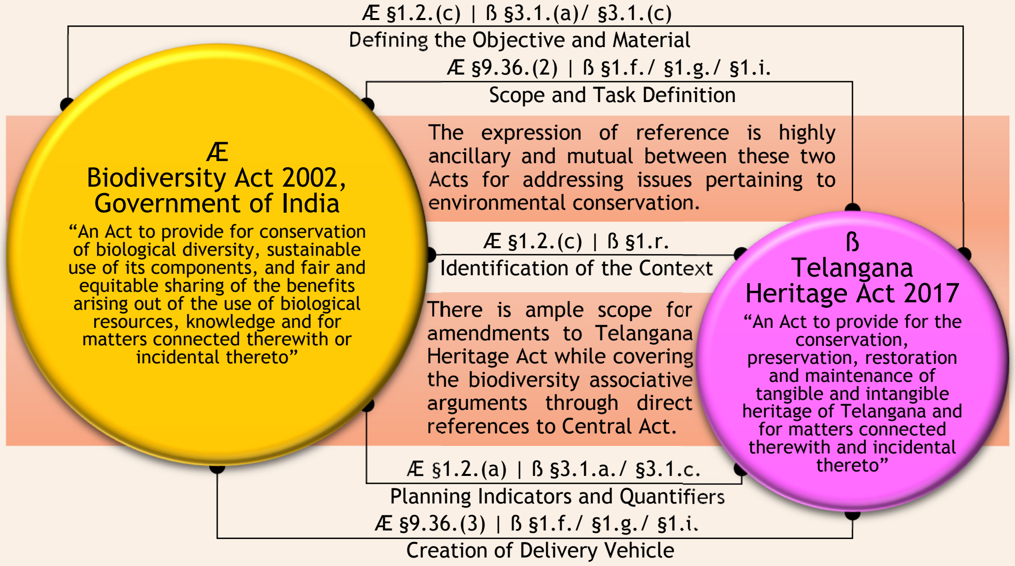
§ 3. 1. (c) The tangible Heritage consists which includes, (ii) any article, object or thing detached from a building, cave, murals, fossils, geological and geomorphic formation.

There is neither scientifically proven information nor active studies to comprehend the historical biodiversity in Telangana. There must have been many changes to biological systems across Jurassic period up till now, and exceptionally where the environment is predominantly semi-arid. Deccan plateau is a unique ecology in the world with the land/ rock formations of solidified granite of the dominance, and perceived as the prevailing natural heritage called ‘Deccan Boulders’.

> Urban planning must invest in environmental sustainability models of not only cities but also the dependent fringe/ peri-urban where the mutual reliance is always on duplex mode. The planners must prevail on the way laws are framed for support of smallest level of management in microenvironments that camouflage into macro influences, to create biologically diverse cities/ regions in the way nature is supervising mutations in reviving the ecological balance over and again.

In the absence of steady information on mauled and mutated biodiversity due to intense human activity in both urban and rural areas of Telangana, it would be very contentious to rationally describe the context of biodiversity, but is a first opportunity for further presentation on applied legal clauses.

Proven/ approved discoveries on the patterns of ecological sustenance shall be the first motivation to recognize the biodiversity over and done with heritage orientation. Comprehensive hierarchical models on interdependent microsystems of biodiversity must advance the planning approach, and supported by legal obligation with greater enhancements. ☙


Æ §1.2.(c) | ß §3.1.(a)/ §3.1.(c)
Defining the Objective and Material
Æ §9.36.(2) | ß §1.f./ §1.g./ §1.i.
Scope and Task Definition
Æ
Biodiversity Act 2002, Government of India
Æ §1.2.(c) | ß §1.r.
Identification of the Context
ß
Telangana Heritage Act 2017
Æ §1.2.(a) | ß §3.1.a./ §3.1.c.
Planning Indicators and Quantifiers
Æ §9.36.(3) | ß §1.f./ §1.g./ §1.i.
Creation of Delivery Vehicle

The expression of reference is highly ancillary and mutual between these two Acts for addressing issues pertaining to environmental conservation.

“An Act to provide for conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto”

There is ample scope for amendments to Telangana Heritage Act while covering the biodiversity associative arguments through direct references to Central Act.

“An Act to provide for the conservation, preservation, restoration and maintenance of tangible and intangible heritage of Telangana and for matters connected therewith and incidental thereto”

The Urban Agriculture, a Path for Sovereignty in Urban Biodiversity

Madhwa Raja, *(Review)* K. V. Raju

The agriculture system in the down stream of Hyderabad drainage is quite unorganized and an economy of itself. Earlier natural formation of Musi flood marshy patches are converted to land holdings for convenience of cultivation on availability of drain water in huge quantities *(1984 and 2016 comparable images bellow)*. These are no seasonal agriculture practices, but continuous in supply of essentials to the city as a demand center with intense urban density. This activity need not be called as true urban agriculture, but only the peri-urban with the predominant activity as agriculture. Instead, the necessity shall be the promotion of agriculture within the city spaces for the restoration and continuity with biodiversity, while the sustenance of species to the minimum scale of ecological prominence.

Quality Water, an Essential Input.

A study by researchers from Jawaharlal Nehru Technological University and the Central Research Institute for Dryland Agriculture revealed that the concentration of the heavy metals was as high as 550.97 mg./Kg. of Spinach and 493.34 mg./Kg. of Amaranthus. These are samples from the urban agricultural forms across Hyderabad and Ranga Reddy districts, and especially abutting to banks of Musi. High levels of chemical, biomedical, pharmaceutical and industrial effluents and consequent percolation to ground water has changed entire landscape of biodiversity in and around Hyderabad city for almost to an irrevocable state.

Though the current topic is on realizing urban biodiversity through practicing ecofriendly agriculture using true organic resources, the priority is the policies from governing systems to encourage such by designing required promotional incentives, since the land availability in the urban area for non-urban use, and simply impractical due to commercial values associated by demand and trends of growth. Additionally, the application of quality resources with the focus of balanced organic material/ substances shall not be a deterrent to the sustenance of the species and micro-organism.

Report on the State of Food Insecurity in Urban India, 2010.

'MSSRF – Centre for Research on Sustainable Agriculture and Rural Development' and 'WFP – Food Aid Organization of United Nations' recommend that "in the context of urban India is that the potentialities of urban agriculture should be seriously explored".

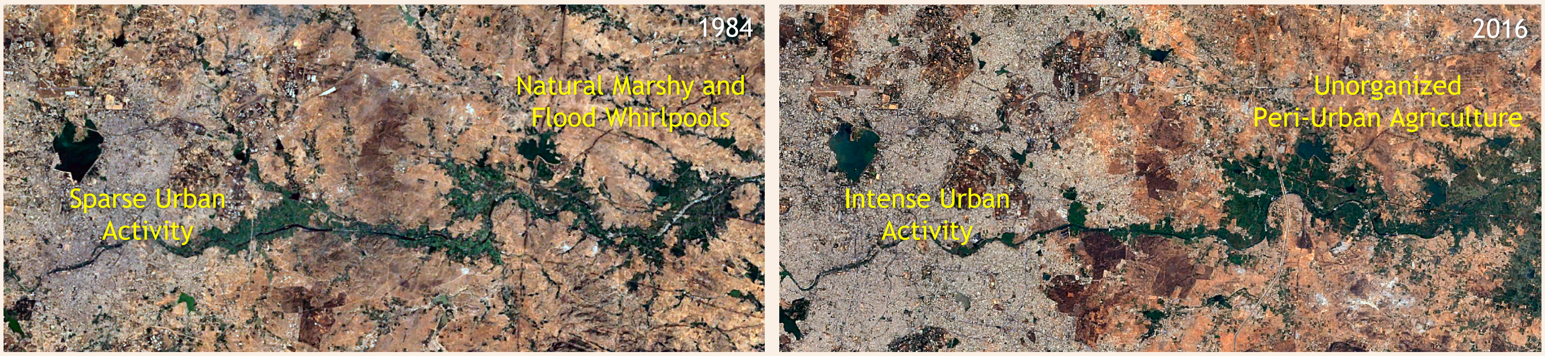
The secondary hindrance is the specific type of practices in promotion of agriculture for a city in geography and to climatic zones. There may have been known methods practiced in the peri-urban areas under commercial farming activities. There is always the possibility when these practices as experiences only be adopted for urban agriculture. Would these known agricultural practices in these climatic zones revive or support biodiversity? Not necessarily, unless the local species have adopted the change, and would remain a hypothesis.

The city greener landscapes must evolve from mere beautification to purposive farming practices. It shall be conservation biology against the density of human living. The planners must evolve truly a multi-disciplinary approach in dealing with this sensitive city model methods in specializations among restoration ecology, landscape ecology, agroecology and ecological economics.

It is important, as the first step, to prepare development plans to assess climate/ micro-climatic requirements among soil conditions, native species of flora and fauna which existed through ages. In such scenario, the definition of urban farms itself will have to be different and location dependent. The practices can not be food requirements of humans alone but for suitability to habitat and endurance of other species. It shall be the synthesis of stable acqua-, horti-, and agriculture (agroforestry), as suitable by local environment. In true and practical terms, it is reformed agriculture by suitability to sensible diversification in activities of bio-conservation. This exercise would be time consuming and expensive too with long gestation cycles, for which the local administration and planning machinery prepare enough resources.

There have been attempts from developed world with an immense focus of agriculture possibilities in urban areas, and with special attention to agri-tourism. There also had been instances in African nations about 'guerrilla gardeners' who are cogently occupying the open lands in the city. But opening the conservation zones to conduct agriculture may also lead to unexpected consequences, unless a control policy in place.

Conclusively, the byproduct is reduction in carbon dioxide for more than thirty tons per hectare due to active urban farms with diversified seasonal flora and permanent or migratory fauna. The researchers on urban sociology reveal that there is tendency of psychological wellness among humans due to environmental conservation around their living and working.


1984
Natural Marshy and Flood Whirlpools
Sparse Urban Activity
2016
Unorganized Peri-Urban Agriculture
Intense Urban Activity

Google Earth Images

Biophilic Urbanism, Only a Theme or Applied Reality?

K. Ravi Kumar Reddy

The word biophilia was coined by biologist E. O. Wilson and describes the innate human tendency to be drawn to the natural world. Planning biophilic cities involves the use of local and natural materials, plants, natural light and ventilation, and water — committed investments in revoking the communications between blurring boundaries of human habitat and surrounding environment to the scale of local and city in organization.

Key Elements of Biophilic Planning,

- Environmental sustenance for longer human activity on space.
- Climate negotiated phenomenon to be embedded into planning.
- Space form and role of environment to define habitat.
- Intricate ecological tradeoffs in the planned environment.
- Rationalized/ enriched relationships between human and nature, well orchestrated biological Interchange.

Biophilia, a term first used by Erich Fromm to describe a psychological orientation of "being attracted to all that is alive and vital", is justly a hypothesis since this phenomenon of communications is not proven to be materially reciprocal with humans. Wilson does not contradict the same, but enhances to "the connections that human beings subconsciously seek with the rest of life forms".

Dual Inheritance Theory (also known as the bio-cultural evolution) is an inheritance of two different and constantly interacting processes of 'genetic evolution' and 'cultural evolution', theorized to have been having influence on each other across generations of species. This may well be a natural incidence than a willful endeavor either by humans or other biological systems in the way to a temporal coexistence.

Since ecological conservationism has to deal with multitude of constraints, planning and plan management are poised to be complex and intensely iterative. The resource mobilization tend to be really challenging.

Almost on the path of creating a second nature, whether the revival from the ruins of prolonged urban decay or inappropriate environmental planning, the biophilia emerges to be a perceptional phenomenon of modern urban habitat as leading requirement.

Habitat specific biophilic features are of appreciation to the nature, which may lead to greater protection of ecology, eliminate pollution, and maintain a clean human livable environment. These could influence real and measurable benefits relative to such human performance metrics as i) healing, ii) learning, iii) stress reduction, iv) productivity, and v) emotional well being. Human deeds have a strong binding to situational awareness that is the union of nature.

A secondary thought of nature bringing wilderness to human universe could change the way urban future with diverse experiences, and great cultural shift in protecting the nature by commitment.

Urban planning parameters would vary from case-to-case and in size of plan domain, and may leave undefined and loosely integrated interactions among ecological territories.

- Access to plant life, environment friendly surroundings, and presence of organic systems for recycling.
- Sustainably sourced and adequate materials from nature.
- Visual diversity of urban vistas.
- Improved situation quality through natural balance in eco-bartering.

Hyperions — An Eco-friendly Vertical Village

Name has been evolved after the tallest tree in the world 'the hyperion' — a sequoia semperviren found in northern California. Paris-based 'Vincent Callebaut Architectures' in collaboration with the Indian agroecologist Amlankusum unveiled the design of 'Hyperions, Agritectural Garden Towers' at New Delhi, India. The design is for a self-sustaining urban utopia that not only grows organic food, but also produces more energy than it consumes in a closed-loop system with expected fusion across 'flora & fauna + controlled agriculture + urban habitat'. It is conceived with the dual objectives of energy decentralization and food deindustrialization. This urban project is very holistic, combining the best use of appropriate technology with all the demands of modern living. Broad advantages are for reconciliation of urban renaturation and small-scale farming with environment protection and biodiversity. It is designed for six of thirty six story connected towers built from cross-laminated timber, providing the best environmental footprint during its life cycle — from harvesting to recycling, through transportation, processing, implementation, maintenance, and reuse.

The planning would have to deal with two major impending concerns during the preparations of plan details,

1. Urban Renewal: The reversal from the decayed ecological situation and to bring biodiversity into forefront as an imminent feature of habitat. This may include the facilities/ space being made available for rejuvenation of other biological systems. The faith and participation from community is the key in realizing the importance of ecology.
2. Development Plans: Assessment of situations and suggested control methodologies for environmental sustenance across types of uses on the land delivered for development. Regulatory system to monitor and manage the growth in embracement of biophilia. Long term viability of plans and the plan management for continuous upgradations needed to showcase the environment friendly requirements of balanced diversity status by default, an essential ingredient of biophilic urbanism.

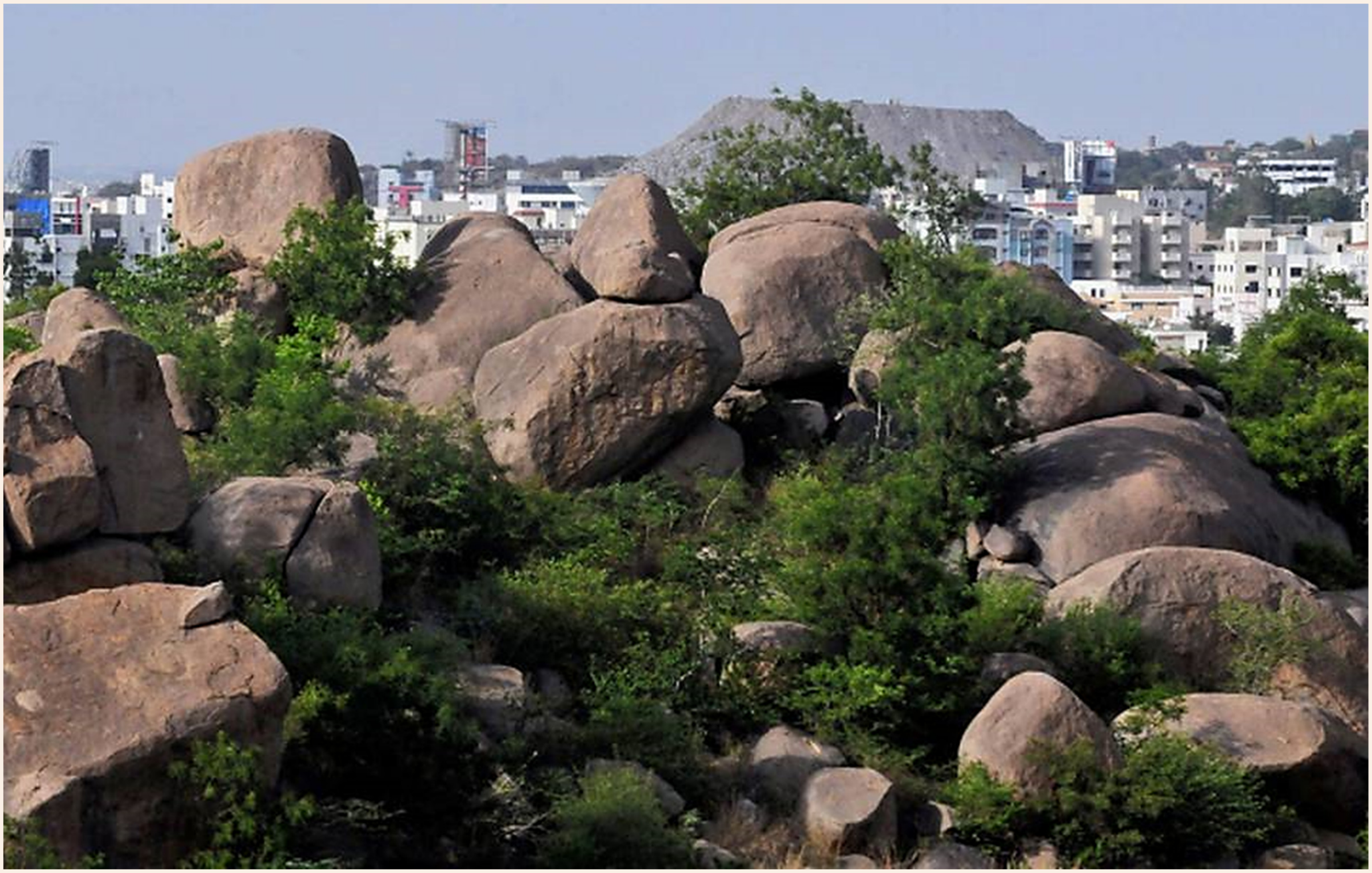
Edward A. Cook, authored a paper on ‘Biophilic Urbanism: Making Cities Sustainable through Ecological Design (2016)’, reiterates the context of urbanism shall be a rejuvenated transformation through appropriate exchange of resources that are well blended with ecological elements. The variables created by establishments, by and large, are synthetic ecosystems which may be providing required services on all temporary basis but resulting in destabilizing the local ecology. Planning strategies to be prepared in addressing preservation, restoration, regeneration, or with the creation of invented systems, such as hybrid and synthetic, and to be more realistic in support of native ecological balance which is a critical input in preparing the frameworks. Planning institution must rely upon strategic variables of a) preserved ecosystems, b) restored ecosystems, c) hybrid ecosystems, d) synthetic ecosystems and e) regenerated ecosystems, and these are rich in exchange of quantifiable information.

All the above arguments on biophilia based planning are leaving more enquiries about the possibility of such than establishing methodologies and frameworks in planning ecological serenity among urban spaces and communities. The compendium of ‘biophilic urbanism’ may remain theoretical, unless established the systems of delivering resources on the complete hierarchy of reactive outcomes. The planning studies are truly multidisciplinary in delivering the dynamic tradeoffs between each variable responsible for balancing the local diversity to city level influences. A planned utopia may have unforeseen environmental consequences, which are needing appropriate identification and plan inclusiveness to a remedial alternatives, either by neutralizing the unpleasant effects through additional/ supplementary systems or balancing by eco-friendly recycling process. These make the entire planning exercise very complex and relational across multiple inputs and along dynamic corrections through dependencies.

Liuzhou Forest City, China

Stefano Boeri looks to have inspired by his earlier work of ‘Bosco Vertical’ at Milan. He announced further plans for China’s first vertical forest, the Italian architect unveiled an even more ambitious vision for the habitation of 1.5 million residents in the southern province of Guangxi. Forest City masterplans are envisioned as models of environmental sustainability since the country is facing issues of choking with smog. Over exploited infrastructure share due to rapid urbanization and dense living cities with only industrial productivity as a major objective casting its’ toll on environment. A scalable development following a petal formation, each petal caters to a population of 20,000 and can be scaled to include five petals in a single region, forming a flower-like establishment centered on communal green space. All buildings would be covered in trees and greenery to help suck tons of carbon out of the atmosphere, pump oxygen into the air, and provide soothing habitat to both humans and native fauna.

Heritage Scape



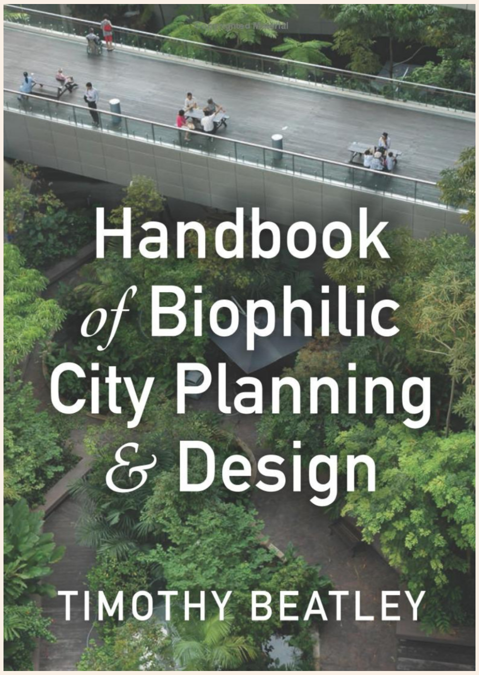
The fast approaching concrete jungle and the vanishing unique Deccan Plateau rock formations near the Cyber City at Cyberabad. In the background is a mound of pulverized rock, waiting to be hauled away to construction sites. *The Hindu (June 03, 2010)*.

Human rights or legal rights, and these two divergent topics are in the forefront for enhanced understanding and applicability. Whanganui River catchment in New Zealand is declared a legal person through a legislation. Similarly, Uttarakhand High Court promulgated Ganga and Yamuna rivers do have the legal rights as equivalent to a human. The legal rights are not necessarily the human rights but only a part of the enactment. Though the appeal well may be inconclusive when the application of legal rights for non-human entity, thus the definition of 'guardian' comes into place. In case of larger environmental issues the role of urban and regional planners shall be of a guardian on planning and protection of biodiversity which encompasses the nature and human interests, and paving the way for management of tradeoffs between these conflicts on the name of development. The legality of the biodiversity again desired to be part and parcel of development plans and the pronunciation/ fixation of specific local characters to the jurisdictional binding and is the subject matter for planners.

Hyderabad city is surrounded by rocky outcrops ranging from 200~300 feet in height, a characteristic feature of the landscape that have been standing tall for millions of years. It is the growth and economic prospects changed the requirement from being natural to mere human exploitation. Incidentally, Government of Andhra Pradesh setup 'AP Urban Art Commission' under §39 of 'AP Urban Areas (Development) Act 1975'. Regulation 13 was introduced in 1995 which enabled the formation of 'Heritage Conservation Committee' during 1996. Along with other heritage sites across Hyderabad region, nine rock formations also have been notified in 1998. This is further increased to twenty five of formations by 2009. Though these are named as heritage for purpose legal recourse, but inadvertently belong to the diversity of nature and along with the evolved ecology over ages and shall be treated for a higher level of priority rights, and Hyderabad is the only city in India to have given such legal/ executive focus to biodiversity. Today, the 'Regulation 13' ceased to exist *(vis-à-vis the earlier notified rock formations?)* due to the introduction of new 'Telangana Heritage (Protection, Preservation, Conservation and Maintenance) Act, 2017.

Though the might is human rights, the balanced approach on environmental sustainability shall be the proposition of ecological planning, and to bring greater legitimacy to rehabilitation rights of biophilia. ☙

Book Review

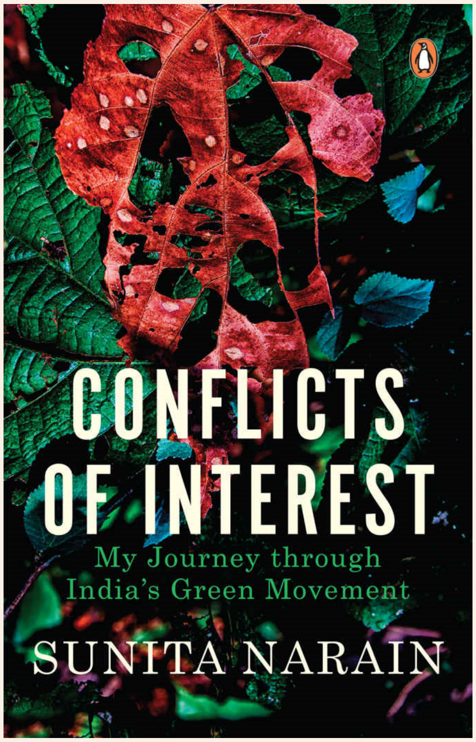


Handbook of Biophilic City Planning & Design, Timothy Beatley, Island Press, 2016.

What if, even in the heart of a densely developed city, people could have meaningful encounters with nature? While parks, street trees, and green roofs are increasingly appreciated for their corresponding services like storm water reduction, from a biophilic viewpoint, they also would facilitate experiences that contribute to better physical and mental health: natural elements in play areas can lessen children's symptoms of ADHD, and adults who exercise in natural spaces can experience greater reductions in anxiety and blood pressure.

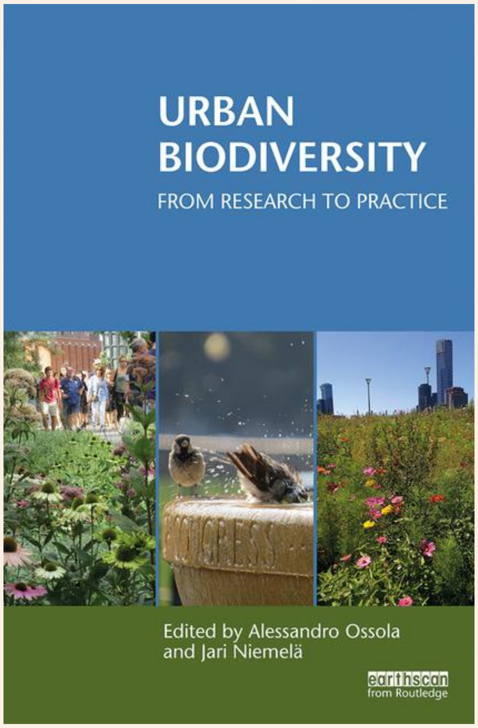
The Handbook of Biophilic City Planning & Design offers practical advice and inspiration for ensuring that nature in the city is more than infrastructure — that it also promotes well-being and creates an emotional connection to the earth among urban residents. Divided into six parts, the Handbook begins by introducing key ideas, literature, and theory about biophilic urbanism. Chapters highlight urban biophilic innovations in more than a dozen global cities. The final part concludes with lessons on how to advance an agenda for urban biophilia and an extensive list of resources.

As the most comprehensive reference on the emerging field of biophilic urbanism, the Handbook is essential reading for students and practitioners looking to place nature at the core of their planning and design ideas. ❧



Conflicts of Interest, My Journey through India's Green Movement, Sunita Narain, Penguin Random House India, 2017.

India's foremost environmentalist, Sunita Narain gives a personal account of her battles as part of the country's Green Movement. While outlining the enormous environmental challenges that India faces today, Narain talks about how corporate lobbies and political interests often scuttle their effective resolution. She recounts some widely reported controversies triggered by research undertaken by her along with her team at the Centre for Science and Environment, such as the pesticides in colas report, air pollution research in Delhi, endosulfan research in Karnataka, among others. Narain also includes an 'environmental manifesto', a blueprint for the direction India must take if it is to deal with the exigencies of climate change due to constant environmental degradation. ❧


URBAN BIODIVERSITY
FROM RESEARCH TO PRACTICE
Edited by Alessandro Ossola and Jari Niemelä
earthscan from Routledge

Urban Biodiversity — from Research to Practice, Edited by Alessandro Ossola and Jari Niemelä, Routledge, 2018.

Urban practitioners frequently ask researchers for more comprehensible information and actionable tools to guide their actions on sustainability. This book is designed to fill this cultural and communicative gap by discussing a selection of topics related to urban biodiversity, as well as its benefits for people and the urban environment. It tend to provide an interdisciplinary studies perspective of scientifically grounded knowledge vital for current and future practitioners in urban biodiversity management, its' conservation and integration into urban planning. Topics covered include pests and invasive species, rewilding habitats, the contribution of a diverse urban agriculture to food production, implications for human well-being, and how to engage the public with urban conservation strategies.

This book synthesizes research at a level suitable for both students and professionals working on ecological conservation, and urban planning and management within the focus of global interdisciplinary perspective from world leading research. ❧

Editor's Choice

[Reprint from Executive Summary of 'Cities, Biodiversity and Governance: Perspectives and Challenges of the Implementation of the Convention on Biological Diversity at the City Level', UNU-IAS Policy Report, United Nations University, Institute of Advanced Studies, 2010.]

City governments can contribute more to implementing the Convention on Biological Diversity (CBD), as the 2010 target to reduce the rate of biodiversity loss set by governments during the World Summit on Sustainable Development in 2002 is not being achieved. The necessity for city governance to tackle the challenges of biodiversity loss has increased as urban populations have grown enormously in the last decades, particularly in developing countries. The way cities are designed, planned, and governed influence the amount of their direct and indirect impacts on biodiversity.

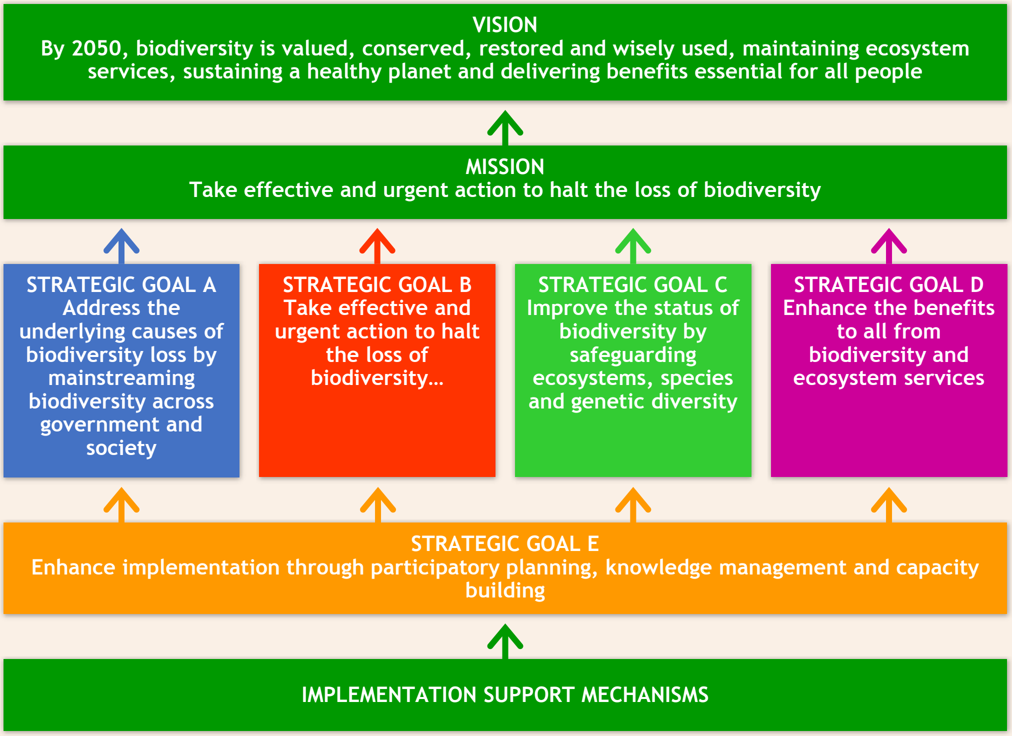
However, the process of interaction between cities and biodiversity is still not well understood, both in theory and in practice. This gap needs to be closed if we want to make progress on the implementation of CBD since more than half of the world's population lives in cities today. As cities are the consumption centers of the world resources, and this proportion will grow in the future, there is no time to lose.

This report analyses the general relationships among cities, local governance, and biodiversity. Initially, it will examine the relationships between cities and biodiversity by looking at the major influences cities can have on biodiversity loss or on conservation within and outside the city boundaries, as well as the benefits of biodiversity conservation for cities, such as the provision of ecosystem services. The report then moves to understand the main instruments and governance mechanisms that exist, allowing global cities to effectively implement the directives of CBD.

Cities are some of the biggest beneficiaries of biodiversity and ecosystem services, as citizens and economic activities depend on those services. However, their involvement in the CBD process is still limited as compared to their potential contribution and amount of benefits they could gain from biodiversity. There are many conceptual underpinnings and governance obstacles to overcome, and we need to create new and adapt existing conservation strategies, as well as city planning and management instruments to deal with biodiversity properly.

Nevertheless, the interest of cities in the biodiversity agenda is moving fast, and there are a lot of opportunities to bring cities to be effective actors in the implementation of CBD. This requires a large effort for collective action to create better governance mechanisms. Good governance at the city level, which indeed can deliver an effective implementation of CBD, depends on governmental and non-governmental actors, not only from one city but from other levels of governments, including international organizations, and of course the cities themselves. The key point in the governance structure is not only the capacity of individual organizations but the strength of coordination among them. Urbanization creates new challenges in efficient conservation of biodiversity. As a large part of the world's population gradually moves from rural to urban areas, there are changes in the link between human activities and biodiversity, and consequently in the way we should think about biodiversity conservation policies. Scarce attention has been given to understanding how to make cities more biodiversity-friendly, not only within, but particularly in the faraway places.

Understanding how cities can create better governance mechanisms to effectively support the preservation of biodiversity within and beyond city boundaries is the key to implement the directives of the CBD. The actors, instruments, and processes that should be in place are still not completely understood enough to move the city and biodiversity agenda forward. This report argues the need to study the conceptual underpinnings of the relationships among city, governance, and biodiversity to create the basis for policies at the global, national, and local level, as well as provide some practical insights on the way to move the biodiversity agenda in cities forward. ❧



VISION
By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people

MISSION
Take effective and urgent action to halt the loss of biodiversity

STRATEGIC GOAL A
Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

STRATEGIC GOAL B
Take effective and urgent action to halt the loss of biodiversity...

STRATEGIC GOAL C
Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

STRATEGIC GOAL D
Enhance the benefits to all from biodiversity and ecosystem services

STRATEGIC GOAL E
Enhance implementation through participatory planning, knowledge management and capacity building

IMPLEMENTATION SUPPORT MECHANISMS

Five Strategic Goals for 20 Aichi Biodiversity Targets

Opinion

[Saba Naseem, Smithsonian Institution]

What Can the Dinosaurs' Final Years Tell Us About the Biodiversity Crisis Today?

Failed ecosystems led to the demise of the dinosaurs. Today, plant and animal species are disappearing at a very alarming rates.

Although dinosaurs roamed the Earth millions of years ago, paleontologists who study fossils from the Hell Creek Formation, located in eastern Montana, North Dakota, South Dakota and Wyomin, have found that the ecosystems that existed back then are comparable to those that support human life today.

Researchers have been examining the ecosystem at the end of the Cretaceous Period in hopes that it will inform the biodiversity crisis of today. As humans continue to alter the Earth's climate, some researchers are building a case that we are currently in the midst of a sixth mass extinction. "Both ecosystems are very complex and surprisingly similar to each other," says Hans-Dieter Sues, curator of the new exhibition 'The Last American Dinosaurs: Discovering a Lost World,' at the National Museum of Natural History. "Anyone exploring western North America 66 million years ago would have seen many familiar animals and plants along with weird ones such as dinosaurs and flying reptiles. Today, we are looking at this ancient ecosystem, the mass extinction and comparing it with the biodiversity crisis currently going on", and the extinction display featuring the dodo, moa bird, carolina parakeet and ivory-billed woodpecker delivers a critical message about the ongoing research about the preservation of ecosystems.

In Earth's 4.5 billion-years, there have been five mass extinctions that have wiped out at least one-fourth of all species. The most recent was the extinction that occurred at the end of the Cretaceous period, roughly 66 million years ago, after an asteroid hit the Earth's surface in what is now the Yucatan Peninsula in Mexico. More than 75% of all species, including dinosaurs and flying lizards, were wiped out. Many dinosaurs may have been killed on impact, but the biggest consequence of the asteroid was the subsequent climate shifts that altered the Earth's atmosphere.

"Climate is a key factor determining the distribution and even the very existence of most living beings," Sues says. "The fossil record documents how organisms have responded to climate changes in Earth's past."

Dust, ash and other materials from the crash blocked radiation from the sun, thus causing a period of prolonged cold weather that made it impossible for plants to carry out photosynthesis. Following this 'impact winter' was a period of hot climate caused by the high levels of carbon dioxide released into the atmosphere. At the same time, the collision triggered global forest fires, tsunamis and powerful earthquakes. New research also suggests that changing sea levels and volcanic activity in the period prior to the asteroid impact had already triggered a decline in biodiversity, thus making the dinosaurs more vulnerable. ☙

Request the members to keep watching for further communication from ITPI-TRC on upcoming debate/ workshop about 'Myth of Global Warming, Critical Assessment by Experts'.

— Workshop Committee.

Kotasaurus Yamanpalliensis, Sauropod Dinosaur, 160 million years old lower Jurassic fossil collected from Adilabad District of Telangana, on display at Birla Science Museum, Hyderabad.

[Dennis D. Murphy, Stanford Univ.]

Challenges to Biological Diversity in Urban Areas

Urban impacts on biological diversity reach their most devastating in the Third World, thousands of species from the region of high endemism have been driven to extinction.

The arguments on protecting biological diversity in urban areas seem straight-forward, but the implementation of conservation programs in urban areas is among the most difficult problems faced by environmentalists. Some urban areas are so disturbed that functioning, and naturally occurring ecosystems are no longer identifiable, whereas other urban habitats remain effectively undisturbed. Open spaces in inner cities often support only species that are particularly well adapted to human impact. Such areas are nearly always small and extremely isolated, and their maintenance and enhancement demand extensive and continuous hands-on management. The conservation goals in such areas must usually aim at maximizing biological diversity to the extent possible, rather than preserving the remaining species.

The single greatest threat to the biological diversity of relatively intact natural communities in and around urban areas is the destruction of natural habitats and their conversion to other uses. The paving over of natural habitats as urban activities sprawl outward destroys and fragments remnant functioning ecosystems. The redistribution of water through channelization and impoundment of flowing waters, and the draining of some wetlands and the flooding of others, destroys undeveloped habitat areas. Activities as seemingly benign as the planting of exotic trees and shrubs in parks and along byways or the conversion of open space to golf courses disrupt the distribution of natural components of biological diversity. These activities combine to decrease habitat area and disturb the equilibrium between extinction and immigration among remaining natural habitats, with the frequent result that some species are permanently lost. ☙

News Makers

On this 15th August, Independence Day was celebrated at ITPI — Telangana Regional Chapter in the presence of many senior planners followed by the executive committee meeting.

Hyderabad Tops the Per-capita Waste Generation

570 grams per day is the highest waste generation in India, where the lowest has been 360 grams from Kolkata. Though it may sound negative, the inference may be that of GHMC is efficient in collecting the solid waste.

Esteemed members of ITPI-TRC are requested to send invaluable comments/ suggestions to itpitrc1@gmail.com with the subject of 'News Letter Committee', which would enable us to improve the contents and coverage further.

— Editor.

Awakening on the Cause of Nature and Citizen Social Responsibility

Gangaram Lake under Mission Kakatiya in Chandanagar is poised for a facelift and beautification with the estimate of ₹19.2 crores, which is inclusive of crowd funding from local residents along with the voluntary participation in works.

GHMC for Increased Administrative Flexibility

Sri. K. T. Rama Rao, Minister for Municipal Administration & Urban Development, believes that there should be a municipal circle office for every three wards, and on that basis, 150 wards in GHMC should have a total of 50 circles. He is also of opinion that current zones of six in number could be increased to ten in number.

The City of Parks and Greenery, an Ambitious Plan

GHMC planned for massive plantation drive of forty lakhs saplings within the city limits during the fresh round of 'Haritha Haram' program, and with active participation from residents welfare associations and NGOs, and urged business houses to work with the civic body and provide tree guards under corporate social responsibility.

Following are the Telangana State declared icons representing the true sense of biodiversity. Along with 'Tangedu' (Tanner's Cassia), the following icons symbolize the culture, tradition and historic significance of Telangana.

The State Bird
Indian Roller (పాలపిట్ట)

The State Animal
Spotted Deer (జింక)

The State Tree
Prosopis Cineraria (జమ్మిచెట్టు)

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